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ANNUAL REPORT

OF

COMMUNICABLE DISEASES

PREVENTIVE HEALTH SERVICES BUREAU

MONTANA DEPARTMENT OF HEALTH

AND ENVIRONMENTAL SCIENCES

Martin D. Skinner, M.D., State Epidemiologist
and Chief, Preventive Health Services Bureau

December, 1977

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ANNUAL REPORT 1976

This report on the status of communicable disease in the State of Montana in 1976 is made possible by the interest and assistance of many of you to whom it is being sent. Everything that is known about many of these diseases and their control in Montana is a product of work and time -- often substantial amounts of both -- put in by physicians, county health officers, public health nurses, sanitarians, and others. We hope you find this information useful. A similar report for 1977 will be prepared early in 1978.

There were no cases of diphtheria, Poliomyelitis or tetanus recognized and reported in 1976.

New tuberculosis cases fell to 51 in 1976 compared to 87 in 1975 and 88 in 1974, even though case-finding through tracing contacts of new cases has been aggressive. This is consistent with the national trend.

Reported infectious hepatitis cases fell to the lowest level in 10 years. This is almost certainly caused by deficiencies in reporting of cases rather than a true decline.

Over 200,000 doses of swine influenza vaccine were given in the state in the last part of 1976. This represents 45.5% of the population 18 years and older and a tremendous amount of effort by local health personnel and volunteers as well as state employees. There were 2 cases of vaccine-associated Guillain-Barre syndrome recognized in Montana. Both recovered fully. The influenza season itself was mild in 1976 in Montana as in the country as a whole. Five cases of influenza B were documented by sero-conversion, and two of A. No wide-spread outbreaks were reported.

Measles was a major public health problem in the 1976-7 measles season. There were 565 reported cases of measles in Montana in 1976, more than in any year since

1971; and 1066 cases occurred in the first 6 months of 1977 alone. In several counties, the local or state health departments were not notified of the presence of measles cases until 2 or 3 generations of cases had occurred and control measures could not be implemented effectively.

28 counties reported one or more cases of measles. 28 counties, with a combined population of close to 20% of the state population, reported none. Counties with ongoing transmission of measles for 3 months or more were Cascade, Daniels, Flathead, Lake, Lewis and Clark, Lincoln, Missoula, and Yellowstone. Counties with short-live outbreaks of 6 cases or more were Carbon, Gallatin, Musselshell, Ravalli, Rosebud, Sheridan, and Teton. Valley County had a substantial outbreak but reporting is incomplete.

The state-wide attack rate for the first six months of 1977 was 13.7 cases of measles per 10,000 total population, or 34.2 cases per 10,000 population aged 0-19 years.

The county with the highest incidence was Daniels, with 306.9 cases per 10,000 population aged 0-19. Next highest were Lincoln, (282.1 cases per 10,000 population aged 0-19), Teton (193.5), Carbon (132.7), Ravalli (67.6), Flathead (66.4), and Lake (57.6). See Table 7.

The Venereal disease situation appears hopeful, for the first time in several years. Although 14 cases of primary or secondary syphilis were reported in 1976, an increase from the average of 6.2 cases a year since 1967, the number of new cases of gonorrhea has levelled off after six consecutive years of increases (See Table 1). There is no reason to believe that this is simply a change in the percentage of unreported cases; indeed it matches the national trend exactly. We believe and hope that both the upturn in diagnoses of syphilis and the plateau in number of gonorrhea cases reflect the aggressive contact tracing of our field staff, local public health personnel, and private physicians.

TABLE 1. Reported Cases of Specified Notifiable
Diseases, Montana, 1967 - 1976

DISEASE	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967
Amebiasis	1	0	-	-	-	-	-	-	-	-
Anthrax	-	-	-	-	-	-	-	-	-	-
Aseptic Meningitis	5	0	1	10	6	10	10	56	11	-
Botulism	1	4	-	-	-	-	-	-	-	-
Chickenpox	1006	941	1255	844	1063	1089	645	713	749	993
Diphtheria	0	6	0	1	0	0	8	0	0	2
Encephalitis	2	15	6	6	15	11	24	28	23	0
Hepatitis A (Infectious)	90	225	383	253	258	225	181	127	282	185
Hepatitis B (Serum)	21	26	28	5	6	13	2	5	-	-
Hepatitis, (Unspecified)	26	43	9	-	-	-	-	-	-	-
Influenza	5295	3359	1969	7107	4464	3364	4833	9007	17480	1753
Leptospirosis	0	0	-	-	-	-	-	-	-	1
Measles (Rubeola)	565	51	284	496	18	924	111	122	56	340
Meningococcal Disease	7	10	8	18	5	3	3	10	9	8
Mumps	27	44	164	314	276	455	827	766	631	-
Pertussis (Whooping Cough)	4	18	8	4	18	26	63	7	31	199
Poliomyelitis	0	0	0	0	0	2	0	2	0	0
Rabies In Animals	4	18	47	44	7	4	3	4	15	11
Rocky Mtn. Spotted Fever	1	5	0	1	2	3	2	1	5	2
Rubella (German Measles)	236	246	27	529	36	126	344	107	97	200
Salmonellosis (Excl. Typhoid)	71	46	56	73	47	84	60	70	38	61
Shigellosis	38	79	350	116	62	89	82	54	97	152
Streptococcal Pharyngitis	3708	3949	4148	5840	5349	4492	3523	1831	1971	2897
Tetanus	0	0	0	0	0	0	0	1	0	0
Tuberculosis	51	87	88	61	64	78	91	100	102	87
Tularemia	3	1	0	0	1	2	3	1	0	2
Typhoid Fever	2	0	0	0	0	0	1	3	0	2
Venereal Disease										
VD - Syphilis (Prim/Sec)	14	8	5	5	7	2	2	10	7	10
VD - Gonorrhea	2021	2173	2056	1768	1594	1212	684	507	669	581

TABLE 2 Deaths from Specified Notifiable
Diseases, Montana, 1967 - 1976

DISEASE	CODE	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967
Chickenpox	052	2	0	1	4	0	1	1	0	1	1
Diphtheria	032	0	0	0	0	0	0	2	0	0	0
Encephalitis	062-065	1	1	0	0	0	0	0	0	0	0
	079.2	1	0	3	2	3	1	2	3	0	4
*Gastroenteritis	009.2	5	3	10	5	4	7	8	6	5	0
Hepatitis, Infectious	070	0	5	2	1	2	3	0	0	0	1
Influenza	470-474	95	17	11	43	15	9	8	38	30	3
Measles	055	0	0	0	0	0	2	0	2	0	0
Meningococcal Disease	036	0	0	1	2	2	2	1	2	2	2
Meningitis, exc. Meningococcal and Tuberculous	320	8	9	6	6	5	9	6	5	6	7
*Pneumonia	480-486	207	185	192	236	220	210	213	201	213	199
Poliomyelitis**	040-043	0	0	1	0	0	1	0	0	1	0
*Pelvic Inflammatory Disease	098.0	0	0	0	0	0	0	0	0	0	0
	098.1	0	0	0	0	0	0	0	0	0	0
	612-614	0	0	0	0	0	0	1	0	0	1
*Septicemia/Pyemia	038	19	11	13	14	7	7	3	7	4	11
Tuberculosis	010-019	9	13	17	13	11	10	12	16	15	17
Typhoid Fever	001	0	0	0	0	0	0	0	0	0	0

*Not officially notifiable diseases

**Late sequelae contributory to death

TABLE 3.
(cont.)

	Mumps	Pertussis (Whooping Cough)	Polio- myelitis	Rabies in Animals	Rocky Mtn. Spotted Fever	German Measles	Salmonella exc. typhoid	Shigellosis	Strep Pharyngitis	Tetanus	Tubercu- losis	Tularemia	Typhoid Fever	Syphilis Prim/Sec	Gonorrhea
Beaverhead															2
Big Horn									35		2			2	118
Bloine							8	9	97		1				21
Broadwater							1	2							1
Carbon															12
Carter															
Cascade	13					1	17	1	60		4	1			289
Chouteau									2						2
Custer							1		116						22
Daniels	2														3
Dawson							2	1							13
Deer Lodge									90		1				3
Fallon															3
Fergus															9
Flathead											4				157
Gallatin									120						73
Garfield									1						
Glacier	1					3	2	13	105		5				155
Golden Valley															0
Granite															1
Hill							8	2	12		3			1	49
Jefferson		1													7
Judith Basin															1
Lake						2			22		3				47
Lewis & Clark		1				8	2		14			1			105
Liberty									7						2
Lincoln											1				20
McCone															0
Madison							1				1				0
Meagher															0
Mineral									6						2
Missoula	2				1	219	1		37		2			1	278
Musselshell							2								4
Park											1				2
Petroleum															0
Phillips											1				5
Pondera	1										1				5
Powder River							1		9		1				1
Powell							1								4
Prairie															2
Ravalli						1					2			1	10
Richland							1				1				5
Roosevelt	3						2	3	3		3		2		43
Rosebud								4	46		1			1	74
Sanders	1						1								3
Sheridan															2
Silver Bow		2					6	1			6				66
Stillwater															2
Sweet Grass															0
Teton											1				3
Toole															2
Treasure															0
Valley							1		55						16
Wheatland													1		2
Wibaux															0
Yellowstone	4					2	13	2			4			8	382
TOTAL	27	4	0	0	1	236	71	38	0	0	48	2	3	14	2028

TABLE 3.

	Amebiasis	Anthrax	Aseptic Menin.	Botulism	Brucellosi	Chickenpox	Diphtheria	Encephalit	Hep. A (Infectious)	Hep. B (Serum)	Hepatitis (Unspec.)	Influenza	Leptospiros	Measles	Meningococc Disease	
Beaverhead																
Big Horn						12				1	1					
Blaine						1										
Broadwater																
Carbon											1					
Carter																
Cascade						2			2							
Chouteau			3			442			36	3				205	1	
Custer						16			1							
Daniels						21								3		
Dowson						6			5					103	1	
Deer Lodge						25										
Fallon						15										
Fergus																
Flathead						175			3					1		
Gallatin						42			3	1						
Garfield																
Glacier			1		1	51			10	1	1			12	1	
Golden Valley																
Granite																
Hill						9										
Jefferson									1							
Judith Basin																
Lake						2			1					111		
Lewis & Clark						26			2	2	2			6	1	
Liberty						72									1	
Lincoln																
McCone																
Madison																
Meagher																
Mineral																
Missoula			1			42			6	4	7			1		
Musselshell																
Park																
Petroleum																
Phillips																
Pondera																
Powder River					1											
Powell																
Prairie																
Ravalli																
Richland									1						1	
Roosevelt														1		
Roselind						3								5	1	
Sanders						16										
Sheridan						5			2							
Silver Bow	1					4										
Stillwater									2	7						
Sweet Grass																
Teton						11										
Toole																
Treasure																
Valley									8	1	5			88		
Wheatland																
Wibaux																
Yellowstone						8			7	1	8			29		
TOTAL	1	0	5	0	2	1006	0	0	90	21	26	0	0	565	7	0

TABLE 4. Reported Cases of Notifiable
Diseases by Month, Montana, 1976

DISEASE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	UNK.
Amebiasis													
Anthrax													
Aseptic Meningitis	1	0	0	0	1	1	1	0	1	0	0	0	0
Botulism	0	0	1	0	0	0	0	0	0	0	0	0	0
Brucellosis	0	1	0	0	0	1	0	0	0	0	0	0	0
Chickenpox	80	41	144	361	101	64	22	20	14	17	75	67	0
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0
Encephalitis	0	0	0	1	0	0	0	0	0	0	0	0	0
Hepatitis A (Infectious)	20	8	6	1	1	3	5	10	2	7	12	15	0
Hepatitis B (Serum)	2	1	1	3	2	1	1	0	3	4	3	0	0
Hepatitis, (Unspecified)	1	2	3	1	2	0	1	0	4	3	4	5	0
Influenza	235	378	375	605	60	8	32	19	63	96	131	73	0
Leptospirosis	0	0	0	0	0	0	0	0	0	0	0	0	0
Measles (Rubeola)	15	25	32	80	31	12	1	2	4	70	60	233	0
Meningococcal Disease	1	0	1	0	0	1	1	0	0	1	1	0	1
Mumps	2	2	3	6	5	1	1	1	0	1	3	2	0
Pertussis (Whooping Cough)	2	0	0	0	0	1	1	0	0	0	0	0	0
Polio my elitis	0	0	0	0	0	0	0	0	0	0	0	0	0
Rabies in Animals	6	3	11	14	12	6	11	2	3	20	1	1	0
Rocky Mountain Spotted Fever	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubella (German Measles)	1	0	89	76	33	29	4	2	0	0	1	1	0
Salmonellosis (Excl. Typhoid)	8	2	7	10	14	6	5	8	4	3	2	2	0
Shigellosis	14	5	1	2	3	2	0	3	1	3	4	0	0
Streptococcal Pharyngitis	300	342	383	325	74	125	203	312	227	315	464	373	0
Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	5	5	2	4	1	1	7	6	3	2	4	5	3
Tularemia	0	0	0	1	0	1	0	0	0	0	0	1	0
Typhoid Fever	2	0	0	0	0	0	0	0	0	0	0	0	0
Venereal Disease													
VD - Syphilis (Prim/Sec)	1	2	1	0	0	1	1	2	0	4	0	2	0
VD - Gonorrhea	180	146	154	145	160	173	212	181	203	159	158	157	0

TABLE 5. Reported Cases of Selected Notifiable
Diseases by Age, Montana, 1976

DISEASE	TOTAL	1	1-4	5-9	10-14	15-19	20-29	30-39	40-49	50-59	60+	UNK
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
Gonorrhea*	2021	0	1	1	256	256	1041	181	47	23	0	215
Hepatitis A	90	0	4	7	4	14	7	1	0	1	1	3
Hepatitis B	21	0	0	0	0	4	7	1	0	1	1	3
Hepatitis, Unspec.	26	0	0	1	2	6	10	3	2	1	0	1
Meningococcal Disease	7	5	1	0	0	0	0	1	0	0	0	0
Tuberculosis, all forms	51	1	1	0	0	0	4	0	4	12	27	2
Measles	565	10	42	191	228	74	7	2	0	0	0	11

TABLE 6. Reported Cases of Rabies in Animals by County and by Type of Animal, Montana, 1972 - 1976

COUNTY	1976			1975			1974			1973			1972		
	SKN	BAT	OTH	SKN	BAT	OTH	SKN	BAT	OTH	SKN	BAT	OTH	SKN	BAT	OTH
Beaverhead															
Big Horn															
Blaine	8		2	17		1	5			3			1	1	
Broodwater															
Carbon															
Carter	2			5											
Cascade															
Chouteau	3			2											
Custer	2		1				3				1				
Daniels	1			4			2			1					
Dawson	6			1	2						1				
Deer Lodge											1				
Fallon	3			28			1								
Fergus	4			17											
Flothead		1						1							
Gallatin		1				1								1	
Garfield							2								
Glacier															
Golden Valley															
Gronite															
Hill	9			6	1		2								
Jefferson															
Judith Basin	7														
Lake						1									
Lewis & Clark		1													
Liberty				8											
Lincoln															
McCone															
Medicine															
Meagher															
Mineral		1			2										
Missoula															
Musselshell		2													
Park		1													
Petroleum															
Phillips	1			4		1	2								
Pondera															
Powder River	1			3			2								
Powell															
Prairie							7		1			1			
Ravalli								3							
Richland	13		1	43		4									
Roosevelt	3			3			5			6					
Rosebud							2				2				
Sanders	1					1									
Sheridan	6			10			5			27		1	4		
Silver Bow															
Stillwater															
Sweet Grass															
Teton															
Toole		2			1										
Treasure															
Valley	3			1		1	2								
Wheatland						1									
Wibaux			1				2			1					
Yellowstone		1													
TOTAL	72	10	5	153	6	11	44	4	1	38	4	2	5	2	0

Table 7

MEASLES BY COUNTY AND AGE IN MONTANA

COUNTIES

Total - 1 1-4 5-9 10-14 15-19 20-29 30-39 40-49 50-59 60+ Unk.

COUNTIES	Total	1	1-4	5-9	10-14	15-19	20-29	30-39	40-49	50-59	60+	Unk.
Beaverhead												
Big Horn												
Blaine												
Broadwater												
Carbon												
Carter												
Cascade	205	7	8	48	105	33	3	1				
Chouteau												
Custer	3	2	1									
Daniels												
Dawson	103		2	33	40	17	2	1			8	
Deer Lodge												
Fallon												
Fergus												
Flathead	1				1							
Gallatin												
Garfield												
Glacier	12	1	2	6	1	2						
Golden Valley												
Granite												
Hill												
Jefferson												
Judith Basin												
Lake	111		20	69	21	1						
Lewis & Clark	6					4	2					
Liberty												
Lincoln												
McCone												
Medicine												
Meagher												
Mineral												
Missoula	1				1							
Musselshell												
Park												
Petroleum												
Phillips												
Pondera												
Powder River												
Powell												
Prairie												
Ravalli												
Richland												
Roosevelt	1			1								
Rosebud	5			2	2						1	
Sanders												
Sheridan												
Silver Bow												
Stillwater												
Sweet Grass												
Teton												
Toole												
Townsend												
Valley	88		3	21	48	15					1	
Wheatland												
Wibaux												
Yellowstone	29		6	11	9	2					1	
TOTAL	565	10	42	191	228	74	7	2	0	0	0	11

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Martin D. Skinner, M.D., State Epidemiologist
and Chief, Preventive Health Services Bureau

April, 1978

ANNUAL REPORT 1977

This report on the status of communicable disease in the State of Montana in calendar year 1977 is made possible by the continued interest and assistance of many of you to whom it is being sent. Everything that is known about many of these diseases and their control in this state is a product of work and time--often substantial amount of both -- put in by physicians, county health officers, public health nurses, sanitarians, and others. We hope you find this information useful.

A similar summary has been prepared for 1976 and is available on request.

IMMUNIZABLE DISEASES

There were no cases of poliomyelitis or diphtheria reported in 1977.

One case of clinical tetanus was reported, in a young Indian woman residing in Deer Lodge county.

Only two cases of pertussis were reported in 1977. This is almost certainly an underestimate, related to the difficulty in making a firm diagnosis in mild cases.

Rubella incidence was down in 1977, with the smallest number of reported cases in any of the last 10 years.

By contrast, the 1976-77 measles season was the worst in 10 years. There were 565 reported cases of measles in Montana in 1976, more than in any year since 1971; and 1066 cases occurred in the first 6 months of 1977 alone. In several counties, the local or state health departments were not notified of the presence of measles cases until 2 or 3 generations of cases had occurred and control measures could not be implemented effectively.

28 counties reported one or more cases of measles. 28 counties, with a combined population of close to 20% of the state population, reported none. Counties with ongoing transmission of measles for 3 months or more were Cascade, Daniels, Flathead, Lake, Lewis and Clark, Lincoln, Missoula, and Yellowstone. Counties with short-lived outbreaks of 6 cases or more were Carbon, Gallatin, Musselshell, Ravalli, Rosebud, Sheridan, and Teton. Valley County had a substantial outbreak but reporting is incomplete.

The state-wide attack rate for the first six months of 1977 was 13.7 cases of measles per 10,000 total population, or 34.2 cases per 10,000 population aged 0-19 years.

The county with the highest incidence was Daniels, with 306.9 cases per 10,000 population age 0-19. Next highest were Lincoln, (282.1 cases per 10,000 population age 0-19), Teton (193.5, Carbon (132.7), Ravalli (67.6), Flathead (66.4), and Lake (57.6).

So far the 1977-78 measles season has been much milder, with an outbreak of 40 cases in Wheatland County in November, December, and January, an outbreak of 30 or more cases in Richland County in February, March and April, and scattered cases in other counties.

HEPATITIS

The major reasons for the jump in Hepatitis A cases were two large person-to-person outbreaks in Glacier and Rosebud Counties, several smaller person-to-person outbreaks involving Deer Lodge, Lincoln, and Flathead Counties, and better reporting of sporadic cases in several counties.

The trend in number of Hepatitis B cases remains gradually upward.

VENEREAL DISEASES

New cases of syphilis (primary and secondary) remain stable at 8 cases for 1977.

New cases of gonorrhea (2196) are up from 2021 in 1976 but the number of cases seems to have levelled off in the years 1974-77.

ZOOSESES

Two serologically confirmed cases of Western Equine Encephalitis occurred in the summer of 1977. With a snowy winter, 1978 may be a busier year for this mosquito-borne disease.

Three of the six reported cases of Rocky Mountain Spotted Fever occurred in Missoula County. The one case of documented Tularemia occurred in a Ravalli County trapper. 6 cases of Colorado Tick Fever were reported.

Rabies prophylaxis (human rabies immune globulin and duck embryo vaccine) was given to Montana residents exposed to one rabid cat, one rabid dog, several rabid bats and skunks, and numerous uncaught bats and skunks. No rabies occurred in man. No rabid skunks were recognized west of the Continental Divide. There is still no documentation of rabies in rodents or rabbits anywhere in the U.S.

The three reported brucellosis cases were all in persons accidentally inoculated with brucella vaccine.

SHIGELLOSIS

A day-care center-related outbreak of diarrhea caused by Shigella sonnei caused 18 of the 37 reported cases of shigellosis.

INFLUENZA

The winter of 1977-78 was characterized by widespread but not severe outbreaks of influenza A/Texas. 44 out of 45 seroconversions in paired sera submitted to the State Laboratory for influenza diagnosis were diagnostic of influenza A/Texas/77 infection. One showed a two-fold titer rise to A/USSR/77.

TABLE 1. Reported Cases of Specified Notifiable Diseases, Montana, 1968 - 1977

DISEASE	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968
Amebiasis	1	1	0	0	0	0	0	0	0	0
Anthrax	0	0	0	0	0	0	0	0	0	0
Aseptic Meningitis	3	5	0	1	10	6	10	10	56	11
Botulism	1	1	4	0	0	0	0	0	0	0
Chickenpox	750	1006	941	1255	844	1063	1089	645	713	749
Diphtheria	0	0	6	0	1	0	0	8	0	0
Encephalitis	3	2	15	6	6	15	11	24	28	23
Hepatitis A (Infectious)	250	90	225	383	253	258	225	181	127	282
Hepatitis B (Serum)	32	21	26	28	5	6	13	2	5	0
Hepatitis, (Unspecified)	43	26	43	9	0	0	0	0	0	0
Influenza	1372	5295	3359	1969	7107	4464	3364	4833	9007	17480
Leptospirosis	0	0	0	0	0	0	0	0	0	0
Measles (Rubeola)	1081	565	51	284	496	18	924	111	122	56
Meningococcal Disease	8	7	10	8	18	5	3	3	10	9
Mumps	13	27	44	164	314	276	455	827	766	631
Pertussis (Whooping Cough)	2	4	18	8	4	18	26	63	7	31
Polioyelitits	0	0	0	0	0	0	2	0	2	0
Rabies In Animals		4	18	47	44	7	4	3	4	15
Rocky Mtn. Spotted Fever	6	1	5	0	1	2	3	2	1	5
Rubella (German Measles)	15	236	246	27	529	36	126	364	107	97
Salmonellosis (Excl. Typhoid)	53	71	46	56	73	47	84	60	70	38
Shigellosis	37	38	79	350	116	62	89	82	54	97
Streptococcal Pharyngitits	4193	3708	3949	4148	5840	5349	4492	3523	1831	1971
Tetanus	1	0	0	0	0	0	0	0	1	0
Tuberculosis	68	51	87	88	61	64	78	91	100	102
Tularemia	1	3	1	0	0	1	2	3	1	0
Typhoid Fever	0	2	0	0	0	0	0	1	3	0
Venereal Disease										
VD - Syphilis (Prim/Sec)	8	14	8	5	5	7	2	2	10	7
VD - Gonorrhea	2196	2021	2173	2056	1768	1594	1212	684	507	669

TABLE 2 Deaths from Specified Notifiable
Diseases, Montana, 1969 - 1977

DISEASE	CODE	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968
Chickenpox	052	0	2	0	1	4	0	1	1	0	1
Diphtheria	032	0	0	0	0	0	0	0	2	0	0
Encephalitis	062-065 079.2	1	2	1	3	2	3	1	2	3	0
*Gastroenteritis	009.2	4	5	3	10	5	4	7	8	6	5
Hepatitis, Infectious	070	2	0	5	2	1	2	3	0	0	0
Influenza	470-474	9	95	17	11	43	15	9	8	38	30
Measles	055	0	0	0	0	0	0	2	0	2	0
Meningococcal Disease	036	0	0	0	1	2	2	2	1	2	2
Meningitis, exc. Meningococcal and Tuberculous	320	4	8	9	6	6	5	9	6	5	6
*Pneumonia	480-486	142	207	185	192	236	220	210	213	201	213
Poliomyelitis**	040-043	0	0	0	1	0	0	1	0	0	1
*Pelvic Inflammatory Disease	098.0 098.1 612-614	0	0	0	0	0	0	0	1	0	0
*Septicemia/Pyemia	038	5	19	11	13	14	7	7	3	7	4
Tuberculosis	010-019	4	9	13	17	13	11	10	12	16	15
Typhoid Fever	001	0	0	0	0	0	0	0	0	0	0

*Not officially notifiable diseases

**late sequelae contributory to death

TABLE 3.

	Amebiasis	Anthrax	Aseptic Menin.	Botulism	Brucellos	Chickenpo	Diphtheria	Encephali	Hep. A (Infectio	Hep. B (Serum)	Hepatitis (Unspec.)	Influenza	Leptospiro	Measles	Meningococ Disease
Beaverhead					1									1	
Big Horn					1	45			4		2	58		2	
Blaine						41					1			1	
Broadwater										1				1	
Carbon						6				1	1			1	
Carter											100			34	
Cascade			2			258			1	5	1				
Chouteau						13			51		4	45		69	1
Custer						19						674		1	
Daniels						16					1	1		1	
Dawson						9			6			9		35	
Deer Lodge									23	5	8	8		3	1
Fallon					1	14						108		2	
Fergus												1			
Flathead								1	11		1				
Gallatin						55								121	
Garfield												105		10	1
Glacier						5			35	1	11			10	1
Golden Valley															
Granite Hill									6	1		3			
Jefferson															
Judith Basin															
Lake						5			1		1			48	
Lewis & Clark						83			4		2			53	
Liberty						9						100			
Lincoln						58			9	1				197	
McCone														1	
Madison															
Meagher												19			
Mineral						5						16			
Missoula				1					13	8	4	9		143	
Musselshell														6	
Park														1	1
Petroleum														1	
Phillips															
Pondera									2						1
Powder River						10			1			4		1	
Powell										1					
Prairie														1	
Ravalli						5				1	1	48		45	
Richland														3	1
Roosevelt						14			1		1	2			
Roselud						11			54	1	1	1		10	
Sanders									1						
Sheridan			1			5		1						4	
Silver Bow	1					50			2			21		2	
Stillwater												16		1	1
Sweet Grass															
Teton						1			1			10		48	
Toole						1			9			11			
Treasure															
Valley								1							
Wheatland														26	
Willoux														2	
Yellowstone						6			15	7	3	3		197	
TOTAL	1		3	1	3	750		3	250	32	43	1372		1081	8

(cont.)

	Mumps	Pertussis- (Whooping Cough)	Polio- myelitis	Rabies in Animals	Rocky Mt. Spotted	German Measles	Scarlet fever exc. type	Shigella	Strep pharyng.	Tetanus	Tubercu- losis	Typhoid Fever	Syphilis Prim/Sec	Gonorr
Beaverhead							1							
Big Horn							2	19	166		6			84
Blaine							1		648		2			28
Broadwater														
Carbon						1			56					7
Carter					1									1
Cascade	9					1	15		632		3			256
Chouteau									2					3
Custer							1		198				1	25
Daniels									10					5
Dawson		1					1		3		2			6
Deer Lodge									460	1	3			12
Ellison											2			
Fergus							3	1						11
Flathead						1			11		6		1	61
Gallatin					1				559		3			113
Garfield														
Glacier	1					1			397		3			146
Golden Valley								1						
Granite Hill							1		148		2			35
Jefferson														11
Judith Basin														
Lake									48		1		1	59
Lewis & Clark						4			27		1		2	120
Liberty								1	58					6
Lincoln						1			26		1			5
McCone														1
Madison														
Meagher									34					1
Mineral					1				78				1	14
Missoula	1				3	4	4		9		5		2	328
Musselshell								3						4
Park							2				2			2
Petroleum														
Phillips														5
Pondera											2			1
Powder River											3			1
Powell									141					5
Prairie									4					
Ravalli							2		60			1		19
Richland								1						6
Roosevelt	1								8		6			100
Rosbud								1	12		2			103
Sanders											1			3
Sheridan														3
Silver Bow						1	1		52		6			72
Stillwater									56					3
Sweet Grass														2
Teton							1		112					2
Toole									4					4
Treasure									5					
Valley						1	2		159					23
Wheatland									8					1
Wibaux														
Yellowstone	1	1					16	10	2		6			499
TOTAL	13	2			6	15	53	37	4193	1	68	1	8	2196

TABLE 4. Reported Cases of Notifiable
Diseases by Month, Montana, 1977

DISEASE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	UNK.
Amebiasis								1					
Anthrax													
Aseptic Meningitis					1			1		1			
Botulism											1		
Brucellosis					1			1			2		
Chickenpox	57	58	102	110	51	67	23	24	24	43	76	115	
Diphtheria													
Encephalitis							2	1					
Hepatitis A (Infectious)	23	13	8	7	11	7	20	21	23	22	50	45	1
Hepatitis B (Serum)	1	4	1	2	4	6	3	2	3	1	4	1	1
Hepatitis, (Unspecified)	1	5	1	2	8	4	2	2	6	3	6	3	
Influenza	104	115	147	136	123	105	97	81	93	102	120	149	
Leptospirosis													
Measles (Rubeola)	112	249	263	244	97	65	7	4	1		3	36	
Meningococcal Disease			2			1				3	2		
Mumps		2		1	1	2	2	1		2	1	1	
Pertussis (Whooping Cough)							1				1		
Polio myelitis													
Rabies in Animals													
Rocky Mountain Spotted Fever													
Rubella (German Measles)	4	1	2		4	1				2	1		
Salmonellosis (Excl. Typhoid)	8	5	1	4	7	2	1	8	5	2	9	1	
Shigellosis				1	3	2		3	1	12	11	3	
Streptococcal Pharyngitis	300	352	413	354	358	340	199	278	262	432	571	661	
Tetanus								1					
Tuberculosis		5	3	5	7	6	3	8	5	9	2	15	
Tularemia													
Typhoid Fever													
Venereal Disease													
VD - Syphilis (Prim/Sec)					1	3	1			1	1	1	
VD - Gonorrhea	179	127	165	147	117	205	195	222	256	177	208	198	

TABLE 5. Reported Cases of Selected Notifiable
Diseases by Age, Montana, 1977

DISEASE	TOTAL	1	1-4	5-9	10-14	15-19	20-29	30-39	40-49	50-59	60+	UNK
Diphtheria												
Gonorrhea*	2147	2	2	1	15	503	1178	219	46	15	12	154
Hepatitis A	250		38	40	26	33	56	25	14	7	5	6
Hepatitis B	33		1		1	6	20		5			
Hepatitis, Unspec.	43	1	3	4	3	9	14	6		1	1	1
Meningococcal Disease	8	1	3		1	1		1			1	
Tuberculosis, all forms	68		2	1	1	2	8	2	10	13	29	

COUNTY	1977			1976			1975			1974			1973		
	SKN	BAT	OTH	SKN	BAT	OTH	SKN	BAT	OTH	SKN	BAT	OTH	SKN	BAT	OTH
Beaverhead															
Big Horn															
Blaine	2			8		2	17		1	5			3		
Broadwater															
Carbon															
Carter	2			2			5								
Cascade															
Chouteau		1		3			2								
Custer	1			2		1				3				1	
Danals	2			1			4			2			1		
Dawson	2			6			1	2						1	
Deer Lodge															
Fallon	2			3			28			1					
Fergus	3			4			17								
Flathead					1						1				
Gallatin					1				1						
Garfield										2					
Gloster															
Golden Valley															
Gronite															
Hill		1	1	9			6	1		2					
Jefferson															
Judith Basin	6		2	7											
Lake		1							1						
Lewis & Clark		1			1										
Liberty							8								
Lincoln		2													
McCone	3														
Medicine															
Meagher															
Mineral					1			2							
Missoula		1													
Musselshell					2										
Park					1										
Petroleum															
Phillips	1			1			4		1	2					
Pondera															
Powder River	3	1		1			3			2					
Powell															
Prairie										7		1			1
Ravalli											3				
Richland	6			13		1	43		4						
Roosevelt				3			3			5			6		
Rosebud										2				2	
Sanders				1					1						
Sheridan	1		1	6			10			5			27		1
Silver Bow															
Stillwater															
Sweet Grass															
Teton															
Toole		1			2			1							
Treasure															
Valley				3			1		1	2					
Wheatland									1						
Wibaux	2		3			1				2			1		
Yellowstone	1	1			1										
TOTAL	37	10	7	73	10	5	152	6	11	42	4	1	38	4	2

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1980
ANNUAL REPORT
OF
COMMUNICABLE DISEASES

PREVENTIVE HEALTH SERVICES BUREAU
MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

John S. Anderson, M.D., Acting State Epidemiologist
and Acting Chief, Preventive Health Services Bureau
April 1981

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ANNUAL COMMUNICABLE DISEASE REPORT
FOR 1980
MONTANA STATE DEPARTMENT OF HEALTH

During 1980 several changes occurred in the state-wide communicable disease surveillance and investigation program. Revisions of the Administrative Rules of Montana related to communicable disease were implemented. The rules had not been revised since 1965. Highlights of those revisions include the following:

1. Definitions were updated.
2. Definition of reporter was expanded to include "A person administering a clinical laboratory in which a laboratory examination of any specimen from the human body yields - evidence indicative of a disease listed - "
 - a. Brucella
 - b. Chancroid
 - c. Diphtheria
 - d. Gonorrhea
 - e. Granuloma inguanae
 - f. Hepatitis A & B
 - g. Leptospirosis
 - h. Lymphogranuloma venereum
 - i. Rubella (non-immune persons only)
 - j. Salmonellosis
 - k. Shigellosis
 - l. Syphilis
 - m. Tuberculosis
 - n. Typhoidar paratyphoid
3. Categorization of diseases according to their public health threat potential was done.
 - a. Reporting requirements are variable in the four categories.
 - b. Weekly reports of some diseases are eliminated.
 - c. Individual case reports are required for rubella, measles, and giardia.
4. Diseases were reassessed as to their relevance for being reportable on an individual case basis.
5. Recommendations for control of reportable diseases were updated.

The other major change relates to the communicable disease control program staff. A nurse epidemiologist now assumes responsibility for co-ordination of reportable disease surveillance activities. The nurse participates in epidemiological investigations with the M.D. Bureau Chief of Preventive Health Services. Immunization and venereal disease program activities are still managed by two federal employees located in the Preventive Health Services Bureau.

IMMUNIZABLE DISEASES

There were no cases of poliomyelitis, diphtheria, or tetanus reported in 1980; only three cases of pertussis were reported. The number of reported rubella cases decreased from sixty-eight, in 1979, to forty-five cases in 1980. On the other hand, the number of reported mumps cases increased from fourteen, in 1979, to sixty-one cases in 1980.

The downward trend in Montana's measles morbidity has been particularly gratifying. In 1977, 1177 cases of measles were reported; in 1979, there were only 56 cases reported; and in 1980, only 2 cases of measles were reported in Montana. The last known case of measles occurring in Montana was in July 1980.

This downward trend in measles morbidity is presumed to be the result of a combination of factors: (1) Better surveillance and reporting, (2) Improved immunization levels, and (3) Rapid and effective outbreak control efforts. A national goal has been set for eliminating indigenous measles from the U.S.

The state-wide School Immunization Law passed by the 1979 legislature became effective during 1980. It was apparent by November 1980 that a significantly large percentage of the schools (approx. 25%) were reporting over 10% of the pupils as "Administrative Exemptions", due supposedly to the parents' failure to get their children immunized or claim a legitimate exemption. For this reason, this Department introduced a new bill (SB 58) to repeal the amendment to the 1979 law which permitted the "failure to act" loophole. This bill received overwhelming support and passed the 1981 legislature. Effective July 1, 1981, Montana's school immunization law will be for the first time, a most effective means to accomplishing a variety of state-wide goals: (1) Significantly improved immunization levels, (2) Less illness due to immunizable childhood diseases, and (3) The elimination of measles.

Influenza reporting is no longer required and so, in 1980, the number of reported cases of influenza understandably declined. The strain of influenza confirmed by the State Laboratory this flu season closely resembled A/Taiwan/79 with no cases of B/Influenza reported. It appears that there will be no federal or state funding support for influenza activities in 1981 or in the immediate future. The Montana Influenza Program distributed 4100 (free) doses of flu vaccine to public and private providers in 1980.

Hepatitis

Reported hepatitis A cases totaled 150. Twenty-one hepatitis B cases were reported. Four cases of non-A, non-B hepatitis were reported; verified by laboratory testing. With the availability of laboratory tests for hepatitis B antigen as well as hepatitis A antibodies, diagnosis has become more specific for all reported cases. Unspecified hepatitis cases reported were reduced to 10 in 1980.

Aseptic Meningitis/Encephalitis

Seventeen cases of aseptic meningitis were reported in 1980. The cases were spread throughout the months of the year with a high of 6 cases reported in August 1980. Nine cases of encephalitis were reported, probably caused by varicella zoster virus and another 1 post-infection. Three deaths were attributed to encephalitis. Coxsackie virus was determined to be the agent in one fatal case and echovirus was identified in one non-fatal case. No encephalitis was identified in the reports as being caused by vector-borne viruses.

Meningococcal Meningitis

Five civilian cases and no military cases of meningococcal meningitis were reported in 1980. Cases occurred within each of the entire span of age ranges and throughout the year.

Shigellosis

Thirty-two cases of shigellosis were reported in 1980. The 0-4 year age group contributed 33% of the cases. While those under 24 added another 30%. No outbreaks were attributed to *Shigella* during 1980.

Salmonellosis

168 cases of salmonella were reported in 1980. Approximately 86 of these were related to an outbreak in Missoula County in June - July. Raw milk was epidemiologically implicated as the vehicle for dissemination of this group B salmonella. Cases were equally distributed throughout the various age groups. Group B was most predominant of the types identified with C & D identified much less frequently.

Typhoid Fever

One case of salmonella typhi was diagnosed in a 3 year old Laotian refugee who was born in the U.S. Extensive contact investigation did not identify a carrier immediately after the occurrence of the case in January 1980. However, during the first months of 1981, several carriers were identified within the Laotian community.

Zoonoses

Eight cases of Colorado Tick Fever were reported and 3 cases of Rocky Mountain Spotted Fever were reported in 1980. One case each of RMSF was reported from one of three separate areas of the state; western, central and eastern. Three of the 6 cases of CTF were reported from Ravalli County with the other 1 and 2 in western and central Montana, respectively.

Fifty-eight cases of animal rabies were reported with skunks being the predominant species. Sixteen bats and 2 bovine were also reported rabid. One dog was found positive.

Ten tularemia cases were recorded with most occurring in Big Horn County and attributed to tick bites.

Giardiasis

Giardiasis was a reportable disease during 1980. 434 cases were definitely recorded. As many as 490 more were probably cases estimated epidemiologically during investigation of a water-borne outbreak in Red Lodge in the summer of 1980. The remainder of cases were reported sporadically from throughout the state. It is now recognized that all surface water sources in Montana may be potentially infested with giardia.

Malaria

One Southeast Asian refugee presented with acute Malaria two weeks after arrival in the U.S.

Tuberculosis

The lowest reported incidence of newly diagnosed TB cases ever, 27, occurred in 1980. The number of persons infected, being treated with prophylactic medication (INH), continued to increase. A change in the criteria for inclusion of an active case in the TB registry may have serendipitiously lowered the newly diagnosed case number for 1980.

Venereal Diseases

1469 cases of civilian gonorrhea and 34 military gonorrhea were reported for a total of 1503. Thirteen civilian cases of syphilis and 3 military cases were reported for a total of 16.

ANNUAL V.D. REPORT 1980

The Montana Venereal Disease Control Program has been primarily concerned with the provision of syphilis and gonorrhea clinical services in the state. These services are vital but represent only a small portion of the sexually transmitted disease (STDs). There are fourteen STDs of which syphilis and gonorrhea are only two. These other problems are as great in numbers as gonorrhea and have severe consequences on the public health. Many public clinics and health departments have recognized this need and are expanding services to include some of the STDs. There are two clinics in Montana that provide full services for STD patients: Missoula County Health Department and the Yellowstone County Health Department whose clinic is in conjunction with the Yellowstone County Family Planning Unit. Two other local health departments have expressed interest in providing these necessary services to their citizens.

The Montana Venereal Disease Control Program will provide assistance to establish these services. Full service STD clinics that are accessible are an identified need in Montana. If you are interested in such assistance, contact the co-ordinator, Mr. Charles D. Bean at 449-2645.

In 1980, there were fifteen new infectious cases of syphilis reported in the state. Five were lesion primary or rash secondary cases and ten were early latent cases where the disease was acquired within the previous twelve months. Many of these cases are from the Great Falls area. For years we have been able to claim that Montana did not have indigenous syphilis. That was because we could trace any infection within two generations out-of-state. The imported syphilis was felt to be three to six cases per year. Our blood screening system of pre-marital, pre-natal, etc. would find many of these cases. The other cases would be reported by concerned physicians and still other infections were found through epidemiology. The process of interviewing each patient with an early case of syphilis and insuring that all skin-to-skin contacts within the source/spread critical period are examined and treated to stop any potential incubation of undetected disease are our best processes for finding cases missed by the health delivery system and the seriology screening system. But more importantly by taking the opportunity to prevent new infections by treating known contacts we apply our greatest impact on the incidence of syphilis.

We ended 1980 with the clear understanding that Montana now has indigenous syphilis in the Great Falls area. Cascade County Health Department and the Montana Venereal Disease Control Program are working together to resolve that problem.

The 1469 gonorrhea cases reported in 1980 were 24% less than the number reported in 1979.

Even though there is a requirement to report, many physicians have admitted they do not report every case they see. To try to resolve some of these problems the V.D. Program is now providing a gonorrhea referral self-interview form that explains the disease and the need for all contacts to be examined and treated. The need for re-screening and tests of cure after treatment of the original patient is also stated. This form along with the "new" Montana Confidential Venereal Disease Case Report" form can be obtained from your local field health officer:

Bruce DeSonia	721-5700 ext. 378	(Missoula)
Rick Nelson	723-8262 ext. 368	(Butte)
Dick Paulsen	449-2645	(Helena)
Steven Linder	657-2126	(Billings)

Or from the V.D. Control Program Co-ordinator's Office at 449-2645.

One of the V.D. Control Program's goals for 1981 is to expose every citizen diagnosed with gonorrhea to a "one on one" interview or to the self-interview referral system. This process is directed at finding the asymptomatic male patient as well as the asymptomatic female patient. If we can remove more asymptomatic carriers from the infected pool we will be able to show sizable reductions to the incidence of gonorrhea.

The Pelvic Inflammatory Disease (PID) caused by gonorrhea is a complication that will remain one of the highest priorities of the Montana Venereal Disease Control Program.

TABLE 1. REPORTED CASES OF SPECIFIED NOTIFIABLE
DISEASES, MONTANA, 1969 - 1980

DISEASE	1980	1979 ^t	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969
Amebiasis	2	10	0	1	1	0	0	0	0	0	0	0
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0
Aseptic Meningitis	18	34	31	3	5	0	1	10	6	10	10	56
Botulism	0	0	0	1	1	4	0	0	0	0	0	0
Chickenpox	*	1164	870	750	1006	941	1255	844	1063	1089	645	713
Diphtheria	0	0	0	0	0	6	0	1	0	0	0	0
Encephalitis	9	8	14	3	2	15	6	6	15	11	24	28
Hepatitis A (Infectious)	150	164	196	250	90	225	383	253	258	225	18	127
Hepatitis B (Serum)	21	22	27	32	21	26	28	5	6	13	2	5
Influenza	*		2683	1372	5295	3359	1969	7107	4464	3364	4833	9007
Leptospirosis	0	0	0	0	0	0	0	0	0	0	0	0
Measles (Rubeola)	2	56	88	1177	565	51	284	496	18	924	111	122
Meningococcal Disease	6	15	6	8	7	10	8	18	5	3	3	10
Mumps	61	14	140	13	27	44	164	314	276	455	827	766
Pertussis (Whooping Cough)	3	15	9	2	4	18	8	4	18	26	65	7
Poliomyelitis	0	0	0	0	0	0	0	0	0	2	0	2
Rabies in Animals	57	8	24	54	88	169	47	44	7	4	3	4
Rocky Mtn. Spotted Fever	3	5	2	6	1	5	0	1	2	3	2	1
Rubella (German Measles)	45	68	22	15	236	246	27	529	36	126	344	107
Salmonellosis (Excl. Typhoid)	168	75	40	53	71	46	56	73	47	84	60	70
Shigellosis	32	144	118	37	38	79	250	116	62	89	82	54
Streptococcal Pharyngitis	*		3989	4193	3708	2949	4148	5840	5349	4492	3525	1831
Tetanus	0		0	1	0	0	0	0	0	0	0	1
Tuberculosis	27	41	58	68	51	87	88	61	64	78	91	100
Tularemia	10	15	0	1	3	1	0	0	1	2	2	1
Typhoid Fever	1	0	3	0	2	0	0	0	0	0	1	3
Venereal Disease												
Syphilis (Prim/Sec)	16	11	9	8	14	8	5	5	7	2	2	10
Gonorrhea	1503	2016	2197	2196	2074	2181	2056	1768	1594	1212	684	507

^t No Annual Report was prepared by Preventive Health Services Bureau in 1979.
Figures have been extracted from several sources.

* Administrative Rule change occurred in July 1980 eliminating individual case reports.



